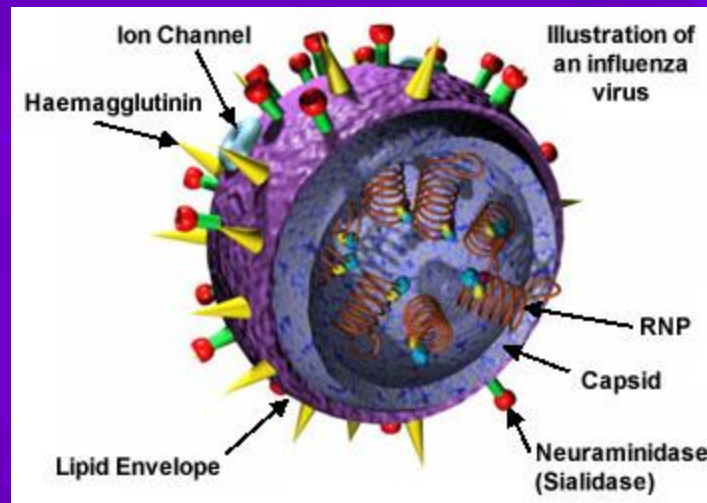


2013 – 2014 Influenza Inservice



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"I hate it when we're not sure we're inoculating against the right strain of flu virus."

Biology of Influenza

Divided into 2 types that spread human disease

- Influenza A
 - H1N1
 - H3N2
- Influenza B
 - New Quadrivalent vaccines have 2 Influenza B like antigens

Influenza Immunity

- Seasonal epidemics are the result of antigenic drift
- Flu vaccine is reevaluated every year to address antigenic drift.
- When antigenic shift occurs a new subtype of influenza A appears and can cause a pandemic (Novel H1N1) because there are no pre-existing antibodies.

Influenza Spread

- Spread by contact with an infected person through:
 - Sneezing
 - Coughing
 - Touching items recently contaminated by a person with the flu virus

Transmission

- Droplet (coughing, sneezing)
- Contact
 - Direct touching of contaminated surfaces
 - Virus may persist 2 – 8 hr on surfaces
- Patients contagious from 1 day before to ≥ 7 days after onset



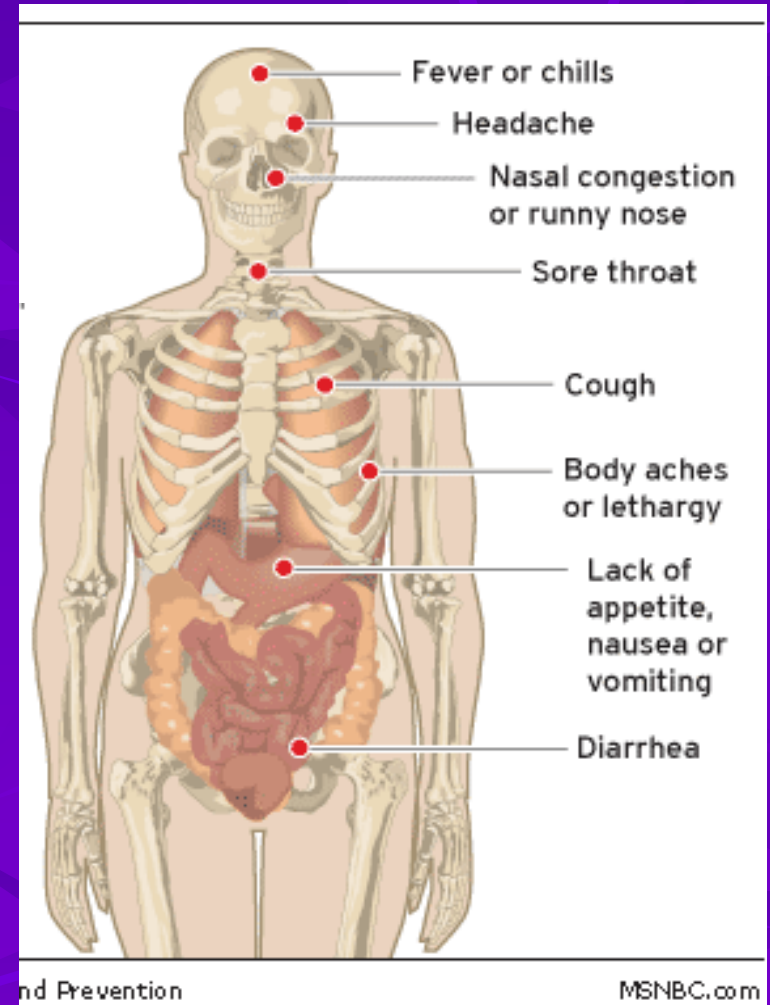
Prevention

- Clean hands frequently
- Avoid touching eyes, nose, mouth
- Try to avoid close contact with sick people
- Get vaccinated



Symptoms

- Fever (typically ≥ 100 F)
- Cough (usually nonproductive)
- Headache, body aches
- Severe fatigue
- Runny nose
- Sore throat
- May have diarrhea, nausea, vomiting



2012 – 2013 Influenza Treatment Recommendations

Influenza is susceptible to the antiivirals oseltamivir (Tamiflu®) and zanamivir (Relenza®)

Start antivirals ASAP for:

- Hospitalized patients.
- High-risk populations for seasonal influenza complications
 - Children < 2 years
 - Adults > 65 years
 - Persons with chronic diseases
 - Persons with immunosuppression.
 - Women who are pregnant or postpartum
 - American Indians/Alaska Natives
 - Persons who are morbidly obese
 - Residents of chronic care facilities
 - Patients with confirmed or suspected influenza who have severe, complicated or progressive illness or who require hospitalization

Influenza Treatment (cont.)

- Antivirals: largest benefit if started within 48 hours of illness.
- Oseltamivir (Tamiflu®) can be used for all ages.
- Can be considered on the basis of clinical judgment for any patient if can be initiated within 48 hours of illness.
- Recommendations may change so clinicians should monitor local resistance data.

Seasonal Flu

- The seasonal flu usually occurs annually between December and March
- Every Year in the U.S. on the average
 - 200,000 Hospitalized (55,000 – 431,000)
 - 3,000 - 49,000 Deaths (Very Young, Old, Immune Compromised)
 - Most recover within 1 – 2 weeks

Seasonal Flu

- Global:
 - Millions infected
 - Between 250,000 to 500,000 deaths per year

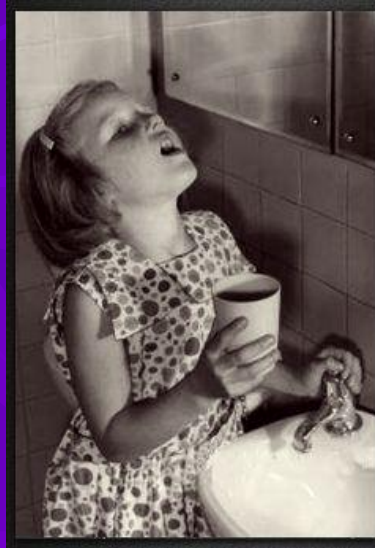
Seasonal vs. Pandemic Flu

- Seasonal flu is predictable – Pandemic flu is not
- Pandemic flu is caused by a novel virus strain that humans have no resistance against
- Pandemic flu infects large numbers of people of different ages globally and can cause serious illness and deaths

Influenza Pandemics of the 20th Century



1918 “Spanish Flu”
20–40 Million Deaths
675,000 U.S.
A (H1N1)



1957 “Asian Flu”
1–4 Million Deaths
70,000 U.S.
A (H2N2)



1968 “Hong Kong Flu”
1-4 Million Deaths
34,000 U.S.
A (H3N2)

The most cost effective way to combat influenza is to prevent it by **immunization** and **good hygiene.**

Influenza Immunization Recommendation

- The CDC recommends vaccination of all persons aged ≥ 6 months of age
- Vaccination to prevent influenza is particularly important for persons who are at increased risk for severe complications from influenza, or at higher risk for influenza-related outpatient, emergency department, or hospital visits.

NOTE: If there is a vaccine shortage and/or late arrival of vaccine supplies (especially early in the flu season), it is appropriate to use contingency plans to vaccinate those persons with high-risk conditions rather than those who wish to reduce risk, or all persons 50 years of age or over until adequate vaccine supplies are available.

Newly Licensed Flu Vaccines

- Quadrivalent live attenuated influenza vaccine (LAIV4; Flumist® Quadrivalent [MedImmune])
- Quadrivalent inactivated influenza vaccine (IIV4; Fluarix® Quadrivalent [GlaxoSmithKline])
- Quadrivalent inactivated influenza vaccine (IIV4; Fluzone® Quadrivalent [Sanofi Pasteur]);
- Trivalent cell culture-based inactivated influenza vaccine (ccIIV3; Flucelvax® [Novartis]),
- Recombinant hemagglutinin (HA) vaccine (RIV3; FluBlok® [Protein Sciences]),

Note on Abbreviations

- IIV (Inactivated Influenza Vaccine, previously TIV).
 - IIV3 (trivalent)
 - IIV4 (quadrivalent)
- RIV (recombinant hemagglutinin influenza vaccine)
- LAIV

The above denote vaccine categories; numeric suffix specifies the number of antigens in the vaccine.

- Where necessary to refer specifically to cell culture-based vaccine, the prefix “cc” is used (e.g., “ccIIV3”).

Inactivated Influenza Vaccine (IIV)

2013 - 2014 FORMULA :

- A/California/7/2009(H1N1) – like antigen;
- A/Victoria/361/2011(H3N2) – like antigen;
- B/Massachusetts/2/2012 – like antigen.
- B/Brisbane/60/2008-like antigen only in the new quadrivalent vaccines.

Per CDC Advisory Committee on Immunizations Practices (ACIP):

Within approved indications and recommendations, no preferential recommendation is made for any type or brand of licensed influenza vaccine over another.

Flu Shots vs. Flu Mist

Flu Shot Intramuscular

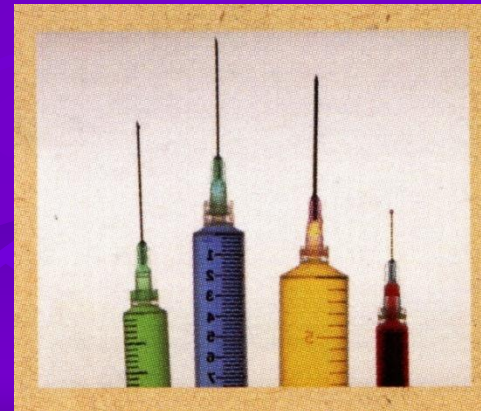
- Immunization into the muscle via needle
- Few contraindications
- Anyone ≥ 6 months

Flu Shot Intradermal

- Intradermal injection with needle inserted perpendicular to the skin in the deltoid area
- Ages 18 through 64
- Dose is 1/5 volume of IM immunization (and requires less antigen)
- Few contraindications
- More local side effects than intramuscular

Flu Mist

- Healthy persons
- Ages 2 – 49 years
- No pregnant women
- No history of wheezing
- No aspirin therapy
- No contact with severely immunocompromised people



Store and Handle Vaccines Properly

Improper vaccine handling and storage may cause it to:

- Lose potency, or
- Become contaminated.



Cold Chain

Vaccines must be stored properly from manufacturing to administration. This includes:

- Manufacturer to distributor,
- Distributor to office,
- Office to patient.



Vaccine Storage and Handling

- IIV, LAIV and PPSV23 should be refrigerated (35°– 46°) at all times.
- These vaccines cannot be frozen or exposed to freezing temperatures.



Tips for Preparing for a Mass Clinic

- Administer only one type of vaccine.
- Separate vaccine stations by vaccine type.
- Transport the vaccine to the clinic in the manufacturer-supplied packaging at the recommended temperature.
- Use an insulated barrier (such as bubble wrap) between the vaccine and the cold or frozen packs.
- A single layer of towel over ice is NOT adequate protection.

Research on Prefilling Syringes

- Increased risk for administration errors.
- Increased vaccine wastage.
- Risk of inappropriate vaccine storage conditions.
- Bacterial growth in vaccines that do not contain a preservative.
- Reduced vaccine potency.

Tips for Prefilling Syringes at a Mass Clinic

- Draw up <1 vial or 10 doses.
- Replenish supply throughout the day.
- Monitor patient flow to avoid drawing up unnecessary doses.
- Discard any syringes other than those filled by the manufacturer at the end of the clinic day.

Vaccine Administration Record

- VAR for clients
- VAR for DHSS staff

2013 – 2014 SHS

Community Clinic Logistics

- All clinics this year are walk-in (no appointments)
 - DPH staff will be meeting with each venue prior to event.
 - Clients will arrive early.
 - Ideally clients will be separate from staging area until clinic is scheduled to open.
 - If large amount of clients in beginning may want to consider assigning numbers.
 - All staff will report one hour before clinic start time.

Community Clinic Staffing

- **DPH greeter** (may also serve as billing staff in smaller clinics)
 - Hand out VAR
 - Direct to table to complete VAR
 - Answer questions about VAR
 - Inform clients to have Medicare card ready
- **Medicare billing staff (2 – 3 people)**
 - Ensure VAR is complete, signed.
 - Completes Medicare billing sheet
 - Use Medicare card and completed VAR to fill out demographics.
 - Client must sign
- **Screen children for VFC eligibility** (On VAR)

Community Clinic Staffing (continued)

- Lead Nurse
 - Answers questions of staff.
 - Discusses clinic process with Instructors (Instructors to sign off on each VAR completed by students, Instructors and students need to have viewed this presentation).
 - Ensures DMRC volunteers have completed paperwork.
 - Ensures clinic runs smoothly.
 - All requests for additional or restock of supplies to be requested via lead nurse.
- Nurses (1 to 4) (at least 2 nurses are required at flu clinics).
 - Check VAR for contraindications for vaccine (Bring your 2013 Standing Orders)
 - Administer vaccine
 - **Complete** VAR and sign
 - Check for adverse effects

ALL DPH STAFF WILL SET UP/BREAK DOWN
VACCINATION AREAS

Packing Flu Clinic Supplies

Support Staff

- Alcohol Pads
- Band-Aids
- Sharps Containers (1 for each nurse)
- Gloves
- Hand Sanitizer
- Gauze Pads
- Table Covers
- Calculator
- Receipt Book
- Stapler, Paper Clips, Rubber Bands
- Tissues
- Tape
- Donation Boxes
- Paperwork
 - VAR
 - VIS
 - Medicare Forms, Cash Report
 - Flu Binder
 - S.O.: Flu, Medical Emergency
 - Exposure Policy (DPH PM 27)
 - VAERS Form
 - Vaccine/syringe wasting form
- Pens
- Clip Boards
- Red Bags
- Numbers

Packing Flu Clinic Supplies

Lead Nurse/& Immunization Staff

- Vaccine
- Syringes
- Emergency Box
- Oxygen
- AED
- Standing Orders
 - Flu
- Coolers

DMRC Release Form



DELAWARE HEALTH
AND SOCIAL SERVICES
Division of Public Health

Office of the Director

Date

Dear Name, Profession, License Number,

Thank you for agreeing to provide volunteer professional health services as part of the Delaware Medical Reserve Corp. Your participation in the DMRC may include training, participating in drills or exercises, various activities necessary to improve public health and serving on an organized team to be called upon for service in an emergency. Your participation with the DMRC is strictly voluntary. As a volunteer, all services you perform are performed on behalf of the State of Delaware. You will not receive any compensation from DPH or the State for your services.

By signing below, you agree with the terms stated herein and further agree you understand and will not hold the State of Delaware, its employees, or any other private or public agency participating in the DMRC or any such employees or volunteers liable for any injury or illness that maybe be caused by your volunteer service in the DMRC.

Signature of Volunteer

Date

For Division of Public Health:

Awele Maduka-Ezeh, MD, MPH
Medical Director

Date

Rick Hong, MD
Preparedness Medical Director

Date

Reports


Support staff is responsible for sending the following reports (clinic manager to designate responsible personnel)

Cash Report ([see Cash Accountability H.O.](#))

- 2 people to count donations @ site.
- 3rd person to transport donations back to clinic.
- Deposits will be made with a note of “Flu Clinic” and the name. Copy of Cash Accounting form and deposit slip scanned to Sue Kenton.

Reports Continued

- Statistics Report
 - One person at each unit will be designated to complete the statistics form.
 - Usually done immediately following a clinic (or the next morning for evening clinics)
 - Sent to Danielle Briggs/TBD by noon on Monday.
- Person responsible for reports emails all involved in clinic with the numbers.
- All immunizations administered must eventually be entered into Del Vax.



Frequently Asked Questions

2013 – 2014 Flu Season

Why Do I Need a Flu Shot?

- 200,000 (on average) Hospitalized (55,000 – 431, 000)
- 3,000 - 49,000 Deaths (Very Young, Old, Immune Compromised)



Am I too young for a flu shot?



No – everyone age 6 months and up is recommended to receive the Influenza vaccine

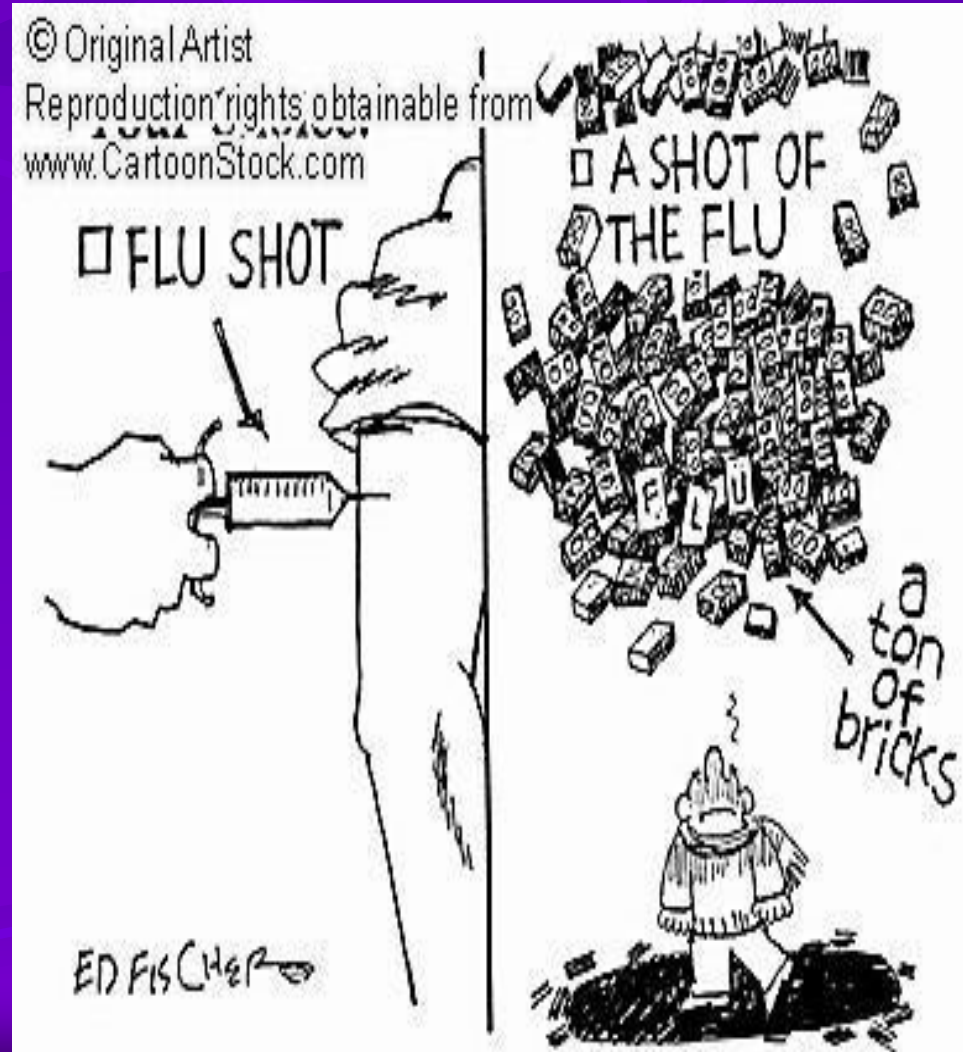
What types of flu vaccine are available?



- IIV: “Flu Shot” (intramuscular or intradermal)
 - High Dose
 - Trivalent vs. quadrivalent (IIV3 vs. IIV4)
 - Recombinant (RIV)
- LAIV: - FluMist®(only quadrivalent)

Can I get the flu from the vaccine?

NO – The injectable vaccine does not contain any of the live virus so it is impossible to get the flu. LAIV is made from weakened virus and does not cause influenza. The vaccine can cause mild symptoms in some people. Although they can occur after vaccination, they may not have been caused by the vaccine.



What are the CDC vaccination recommendations?

All persons aged ≥ 6 months of age.

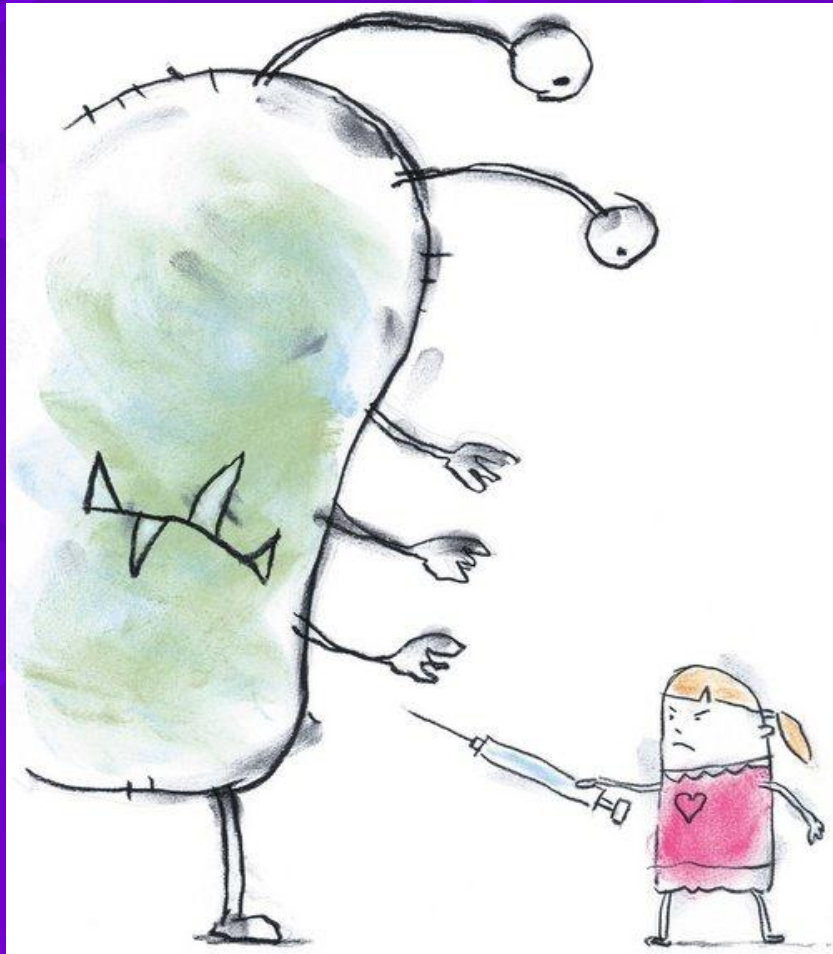
Who should not be vaccinated?

- People with severe allergies to eggs or other vaccine components.
- People who have had a severe allergic reaction to past influenza vaccination.
- Children younger than 6 months of age.

Why do I need to get vaccinated against the flu every year?

- After you get vaccinated your immunity declines over time and may be too low to provide protection after a year.
- Because the viruses mutate and become more or less prominent each year the vaccine is protecting you against different viruses.

What are the side effects from the flu shot?



- Soreness, redness, or swelling where the shot was given,
- Fever,
- Aches ,
- Life-threatening allergic reactions from vaccines are very rare. If they do occur, it is within a few minutes to a few hours after the shot.

What are the side effects from the FluMist®?

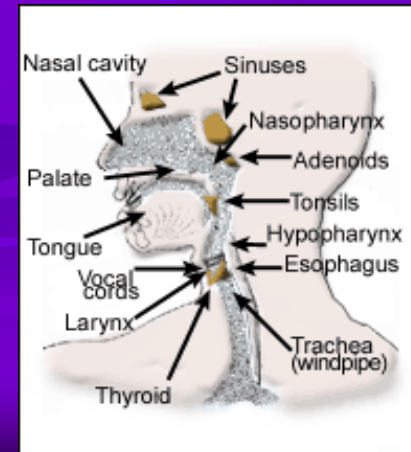
Children (2 – 17 ys)

- Runny nose or nasal congestion (44%) or cough
- Fever (7% children fever >100° F)
- Headaches and muscle aches
- Wheezing
- Abdominal pain or occasional vomiting or diarrhea

Adults (18 – 49 ys)

- Runny nose or nasal congestion (32%)
- Sore throat (reported by 19% of adults)
- Cough, chills, tiredness/weakness
- Headache

A severe allergic reaction could occur after any vaccine (estimated at <1 in a million doses).



Will pneumonia vaccine be offered at community flu clinics?

- Pneumonia vaccine will only be available at the DPH Immunization clinics at State Service Centers.
- Pneumonia vaccine can be given throughout the year (not seasonal), therefore can be administered during a routine doctor's visit.